

Examples of parallelism and convergence in the tribe are discussed and its origin and dispersal elucidated. It is hypothesized that the modern genera became established by the end of the Cretaceous period, and that they reached their present distribution at that time. A nearctic origin for this group of aphids is suggested.

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A History of Entomology. O. E. Essig. A facsimile of the original 1931 edition, The Macmillan Company, by Hafner Publishing Co., New York and London, \$16.50.

It is gratifying to see that the enterprising Hafner Publishing Company has brought out a facsimile edition of Essig's great *History of Entomology*. There is no other single volume that presents as much information about economic entomology and its development in California, the first western state to realize the importance of pest control. After an 80-page introduction to entomology in that state from the time of the Indian tribes to 1930, 450 pages are devoted to the details of what has been done to make the fields and orchards of California more productive and the cities and towns safer and more comfortable for humans. No student of economic entomology, or of insects that have economic importance anywhere, can safely overlook this most authoritative and fully documented story of the ceaseless battle between man and pests. Although the introduction of modern organic pesticides makes this 35-year-old book dated so far as control measures are concerned, it is a volume that modern control agencies must study carefully in light of the destructive side-effects of many of the new pesticides. It is quite possible that future legislation to safeguard humans and the environment will force control agencies to turn back to earlier methods of combat. The long chapter upon biological control, 125 pages, is an acute summary of what has been done, and can supply direction to what can be done with this "natural" method.

For me the most valuable part of the entire volume is Chapter IX, a small book in itself, over 250 pages of biographical data about the men whose force has been felt in Californian entomology. There are several hundred sketches, each supported with a bibliography. They treat of taxonomists and field collectors, economic entomologists, exploring entomologists, professionals and amateurs. It is a treasurehouse of information about the great founders of entomology from Linnaeus onward, those who established the study of insects in North America and those who have fostered it in the West. Not all that Essig wrote is true today, but his errors are few and rarely serious. The discovery in archives and libraries during the past three decades of the personal papers and correspondence of many 19th Century, and earlier, American entomologists has brought to light information that was not available to Essig.

Chapter X is equally important to the entomological historian. It is a chronological table "Showing the development and progress of Entomology in relation to History and other Sciences." There are 142 pages of this table, written in three columns, "Births," "Events" and "Deaths." The first entries are the birth of Columbus and Gutenberg's invention of printing with movable type. One lead to the discovery of America, the other to the rapid dissemination of knowledge. The earliest entomological event noted is the printing of Conrad von Megenberg's *Buch der Natur* in 1475. The last year contained in the calendar is 1929 with 19 entomologically important events and the deaths of H. G. Dyar, F. H. Chittenden, W. T. Clarke and C. R. Orcutt reported. A continuation of this calendar by someone well versed in the total field of entomology is a task that should be done.

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